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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,077	05/09/2001	Michiaki Sakamoto	12873A	4429

7590 12/05/2001

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EXAMINER

NGUYEN, DUNG T

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/852,077

Applicant(s)
Sakamoto

Examiner
Dung Nguyen

Art Unit
2871



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 12, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-39 is/are pending in the application.
- 4a) Of the above, claim(s) 32-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/363,868.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 20) ☐ Other: _____

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DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the optical compensation films (e.g., positive and negative) forming between one of two substrates and a polarizing film (claims 26-27) must be shown or the feature(s) cancelled from the claim(s). No new matter should be entered.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 26-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Regarding claims 26-27, it is confusing and unclear how liquid crystal molecules can be aligned by applying a voltage to the optical compensation films. According to the LCD art, liquid crystal molecules would be aligned when applying a voltage to alignment layers which formed on the LCD substrates. Therefore, for the purpose of examination, it is assumed that liquid crystal molecules are felled when a voltage is applied to the alignment layers.

Regarding claims 28-31, as noted above, alignment layer will align the liquid crystal molecules in the liquid crystal layer from the initial state controlled by pretilt angle. Therefore, the alignment layer need to be irradiated (e.g, by UV light) to form pretilt angle on its surface (e.g, application, fig. 11). Therefore, it is assumed that Applicant tends to claim light irradiation forming the pretilt angle is conducted on the surface of the alignment layer from a slant direction.

Double Patenting

5. Claim 29 is rejected under 35 U.S.C. 101 as being a substantial duplicate of claim 31. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to reject the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).
6. Claims 26-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24-25 of copending Application No. 09/363,868. Although the conflicting claims are not identical, they are not patentably distinct from each other because both application disclose the same method of

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forming an LCD device and the method of forming an alignment layer by light instead of rubbing would have been obvious to one skilled in the art .

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimada et al., US Patent No. 5,852,485 , in view of Xu et al., US Patent No. 6,023,317 and Kim et al., US Patent No. 5,889,571.

Fuj, 1873

Regarding the above claims , Shimada et al. disclose an in-plane switching liquid crystal display (LCD) device having:

- a pair of substrate (21, 212);
- a liquid crystal layer (217) formed therebetween;
- a thin film transistor (TFT);
- a color filter (218);

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- a common electrode (213) and a pixel electrode disposed between the color filter and the liquid crystal layer;

Shimada et al. neither disclose an insulating layer forming between the pixel electrode and the common electrode nor compensation film and method of forming pretilt angle by light.

One skilled in the art would have realized the desire to form an interlayer between two electrodes (e.g, pixel and common electrodes) for insulating such two electrodes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to form a common electrode under an insulating layer and a pixel electrode over the insulating layer in order to avoid cross-talk between two different electrodes.

Xu et al. do disclose in figures 1-3 that an optical compensation film (e.g, positive or negative) can be disposed between a substrate and a polaziring film. In addition, Kim et al. disclose a pretilt angle formed by polarized light (fig. 3). Therefore, it would have been obvious to one skilled in the art to employ the optical compensation film in the Shimada et al. device in order to improve viewing characteristics (Xu et al., abstract) as well a to form a pretilt angle on the surface of an alignment layer since it is a common practice in the art to form a pretilt angle on the large size LCD device (Kim et al., abstract).

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dung Nguyen whose telephone number is (703) 305-0423. The fax phone number for this Group is (703) 746-7730.

Any information of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 308-0956.

DN
11/19/2001

A handwritten signature in black ink, appearing to be 'K. Parker', written over a set of three vertical lines.

**KENNETH PARKER
PRIMARY EXAMINER**